

TABLE 1 OF § 1039.104—ALTERNATE FEL CAPS

Maximum engine power	PM FEL cap, g/kW-hr	Model years for the alternate PM FEL cap	NO <sub>x</sub> FEL cap, g/kW-hr <sup>1</sup>	Model years for the alternate NO <sub>x</sub> FEL cap
19 ≤ kW < 56 .....	0.30	<sup>2</sup> 2012–2015		
56 ≤ kW < 130 <sup>3</sup> .....	0.30	2012–2015	3.8	<sup>4</sup> 2012–2015
130 ≤ kW ≤ 560 .....	0.20	2011–2014	3.8	<sup>5</sup> 2011–2014
kW > 560 <sup>6</sup> .....	0.10	2015–2018	3.5	2015–2018

<sup>1</sup>The FEL cap for engines demonstrating compliance with a NO<sub>x</sub> + NMHC standard is equal to the previously applicable NO<sub>x</sub> + NMHC standard specified in 40 CFR 89.112 (generally the Tier 3 standards).

<sup>2</sup>For manufacturers certifying engines under Option #1 of Table 3 of § 1039.102, these alternate FEL caps apply to all 19–56 kW engines for model years from 2013 through 2016 instead of the years indicated in this table. For manufacturers certifying engines under Option #2 of Table 3 of § 1039.102, these alternate FEL caps do not apply to 19–37 kW engines except in model years 2013 to 2015.

<sup>3</sup>For engines below 75 kW, the FEL caps are 0.40 g/kW-hr for PM emissions and 4.4 g/kW-hr for NO<sub>x</sub> emissions.

<sup>4</sup>For manufacturers certifying engines in this power category using a percentage phase-in/phase-out approach instead of the alternate NO<sub>x</sub> standards of § 1039.102(e)(1), the alternate NO<sub>x</sub> FEL cap in the table applies only in the 2014–2015 model years if certifying under § 1039.102(d)(1), and only in the 2015 model year if certifying under § 1039.102(d)(2).

<sup>5</sup>For manufacturers certifying engines in this power category using the percentage phase-in/phase-out approach instead of the alternate NO<sub>x</sub> standard of § 1039.102(e)(2), the alternate NO<sub>x</sub> FEL cap in the table applies only for the 2014 model year.

<sup>6</sup>For engines above 560 kW, the provision for alternate NO<sub>x</sub> FEL caps is limited to generator-set engines.

(5) You may certify engines under this paragraph (g) in any model year provided for in Table 1 of this section without regard to whether or not the engine family's FEL is at or below the otherwise applicable FEL cap. For example, a 200 kW engine certified to the NO<sub>x</sub> + NMHC standard of § 1039.102(e)(3) with an FEL equal to the FEL cap of 2.8 g/kW-hr may nevertheless be certified under this paragraph (g).

(6) For engines you produce under this paragraph (g) after the Tier 4 final standards take effect, you may certify based on a NO<sub>x</sub> + NMHC FEL as described in Table 1 of this section. Calculate emission credits for these engines relative to the applicable NO<sub>x</sub> standard in § 1039.101 or § 1039.102, plus 0.1 g/kW-hr.

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#### § 1039.105 What smoke standards must my engines meet?

(a) The smoke standards in this section apply to all engines subject to emission standards under this part, except for the following engines:

(1) Single-cylinder engines.

(2) Constant-speed engines.

(3) Engines certified to a PM emission standard or FEL of 0.07 g/kW-hr or lower.

(b) Measure smoke as specified in § 1039.501(c). Smoke from your engines may not exceed the following standards:

(1) 20 percent during the acceleration mode.

(2) 15 percent during the lugging mode.

(3) 50 percent during the peaks in either the acceleration or lugging modes.

#### § 1039.107 What evaporative emission standards and requirements apply?

There are no evaporative emission standards for diesel-fueled engines, or engines using other nonvolatile or non-liquid fuels (for example, natural gas). If your engine uses a volatile liquid fuel, such as methanol, you must meet the evaporative emission requirements of 40 CFR part 1048 that apply to spark-ignition engines, as follows:

(a) Follow the steps in 40 CFR 1048.245 to show that you meet the requirements of 40 CFR 1048.105.

(b) Do the following things in your application for certification:

(1) Describe how your engines control evaporative emissions.

(2) Present test data to show that equipment using your engines meets the evaporative emission standards we specify in this section if you do not use design-based certification under 40 CFR 1048.245. Show these figures before and after applying deterioration factors, where applicable.

#### § 1039.110 [Reserved]

#### § 1039.115 What other requirements apply?

Engines that are required to meet the emission standards of this part must meet the following requirements, except as noted elsewhere in this part:

(a) *Crankcase emissions.* Crankcase emissions may not be discharged directly into the ambient atmosphere